

REMARKS

At the outset, the Applicants wish to thank Patent Examiner Hargobind Sawhney for the many courtesies extended to the undersigned attorney during the Personal Interview on May 28, 2009 at the U.S.P.T.O. The substance of this Personal Interview is set forth in the Examiner Interview Summary Record, and in this Amendment.

The amendments to this patent application are as follows. Claim 14 is being amended to recite "wherein the size of the scatter bodies has a multimodal distribution function and wherein the portion by weight of the scatter bodies is 0.0001 to 10% and the size of the scatter bodies is 0.1  $\mu\text{m}$  to 5  $\mu\text{m}$ ."

Support for this terminology added to claim 14 is found on Page 4 of the present Specification.

Newly added claim 15 recites that the size of the scatter bodies has a narrow distribution function. Support for this is found on Page 4 of the present Specification.

Newly added claim 16 recites that the size of the scatter bodies has a Gauss distribution about one size. Support for this is found on Page 4 of the present Specification.

Newly added claim 17 recites that mixtures of scatter bodies have a bi-modal or multi-modal, narrow distribution function. Support for this is found on Page 4 of the present Specification.

Newly added claim 18 recites that the size of the scatter bodies have a Gauss distribution. Support for this is found on Page 4 of the present Specification.

Newly added claim 19 recites that wherein on account of diffuse light radiation (17) through the plurality of recesses in the opaque cover layer, symbols (9) in plan view (8) may be advantageously recognized to the same extent by an observer (13) viewing in a direction of an optical axis (12), and by an observer (14) viewing at an angle of approximately 45° to the optical axis (12).

Support for this language in claim 19 is found on page 10 in the first or the third paragraph of the present Specification.

In summary, new claims 15, 16, 17, and 18 refer to the size range for the scatter bodies. Support for this terminology is found on page 4 in the second paragraph of the present Specification. In summary, new claim 19, which is supported by page 10, of the present Specification, has to do with the ability

to view the symbols (9) whether observing in the direction of the optical axis (12) or at an angle of approximately 45 ° to the optical axis (12).

New independent claim 20 is being added and is based upon a combination of claims 14 (15), 16, and 19. Also, the Patent Examiner during the Personal Interview requested that additional structure be added into the subject matter of claim 19. Thus, the terminology "through said plurality of recesses in said opaque cover layer" was added to the paragraph that was taken from claim 19.

A further independent claim is being added which is new claim 21 and is based upon the subject matter of claims 14, 17, 18, and 19, and also including the phrase "through said plurality of recesses in said opaque cover layer" added to the paragraph based upon the subject matter of claim 19.

On Page 2 of the Office Action, the Patent Examiner has rejected claims 2, 3, and 5-14 under 35 U.S.C. 103(a) as being unpatentable over *Neugass* (U.S. Patent No. 2,693,656) in view of *Daniel* (U.S. Patent No. 4,466,697).

The present invention is directed to a rear illuminable information unit for a technical apparatus or machine comprising:

- (a) a transparent plastic housing comprising a rear surface illuminable by an artificial light surface and a front surface;
- (b) a plurality of transparent scatter bodies embedded in the housing; and

- (c) an opaque cover layer provided on the front surface of the housing, said cover layer comprising a plurality of recesses produced by laser processing; and

wherein the size of the scatter bodies has a multimodal distribution function and wherein the portion by weight of the scatter bodies is 0.0001 to 10% and the size of the scatter bodies is 0.1  $\mu\text{m}$  to 5  $\mu\text{m}$ .

During the Personal Interview it was pointed out that neither *Neugass*, nor *Daniel* teach or suggest the claimed multimodal distribution function of the scatter bodies, nor the weight proportion or size range of the scatter bodies. Also, the recited features of newly added claims 15 to 21 are not taught nor suggested by *Neugass* nor *Daniel*.

During the Personal Interview the Patent Examiner reviewed the proposed amended independent claim 14, and the Patent Examiner reviewed the added limitations relating to "multi-modal distribution function" and reviewed the weight percent or the size range for the scatter bodies. The Patent Examiner believed

that these features were either conventional in the art or would not be of any patentable merit relative to the cited prior art references which are *Neugass* and *Daniel*, based upon "optimization."

In response to these conclusions of the Patent Examiner, it was pointed out that the present invention solves a problem not recognized by the prior art, and that the prior art fails to suggest the claimed solution to this problem.

This problem solved by the claimed invention, yet not recognized by the prior art is that on account of diffuse light radiation (17) through said plurality of recesses in said opaque cover layer, symbols (9) in plan view (8) may be advantageously recognized to the same extent by an observer (13) viewing in a direction of an optical axis (12), and by an observer (14) viewing at an angle of approximately 45° to the optical axis (12).

Utilizing the claimed transparent scatter bodies makes it possible for the claimed invention to succeed where the prior art has failed.

During the Personal Interview it was pointed out that *Neugass* in the paragraph bridging columns 3 and 4 of this reference teaches that the particles are white pigment particles

which cause reflection and are not transparent because they are white pigment particles. It was also pointed out during the Personal Interview that the *Daniel* reference in column 4, in lines 1 to 15 teaches that the particles are reflection particles of silver or aluminum and have the ability to reflect light. Specifically, they are small, randomly oriented, thin flakes of silver or aluminum and have light scattering properties, as opposed to being transparent particles, as claimed.

It was also pointed out during the Personal Interview that *Daniel* in column 6, in lines 37 to 48 teaches that it is desirable to concentrate a high proportion of the light scattering particles (40) near the central axis of the optical fiber. Also in *Daniel* it is also desirable to prevent the placement of light scattering particles near the core/cladding interface (52) of the fiber optical fiber.

During the Personal Interview it was argued that the disclosure of these two references taught away from the claimed invention.

However, the Patent Examiner stated that, in his opinion, it was still possible for a claim as broadly worded as claim 14 to read upon the combined teachings of these references because the terminology "multi-modal distribution function of the size of the

scatter bodies" still would read upon the concept of having a randomly oriented distribution for the size of the scatter bodies.

In addition to all of the above reasons for patentability of the present invention, it was further argued that if the size of the scatter bodies is more precisely specified as a Gaussian distribution about one size which is a narrow distribution function, then this is an additional definition of the structure being claimed. This would additionally make it possible to achieve the improvement over the prior art that an observer viewing in a direction of the optical axis (12) and an observer viewing at an angle of 45 degrees to the optical axis (12) would have the same plan view and the same field of view that would be readily available to both viewers.

However, the Patent Examiner, after reviewing page 4 of the Specification, stated that some type of comparative test showing or comparison of information needed to be provided showing that the Gaussian distribution leads to new and unexpected results or new and improved results relative to a prior art random type distribution. That is why the Patent Examiner stated that the inventor needs to provide a convincing showing relating to the benefits of the claimed Gaussian distribution of the particles,

as well as combining claims 14, 16, and 19 in order to overcome the prior art used for previous rejections of the claims.

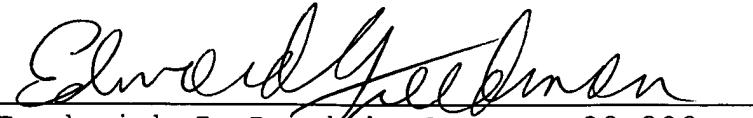
The Patent Examiner in the Examiner Interview Summary agreed that the next Office Action will not be Final. This will provide additional time if it is decided to file a Declaration at a later point in time.

In conclusion, neither of the cited documents disclose a multimodal distribution function of the size of the scatter bodies. Therefore, all the claims are directed to a novel combination of features. Furthermore, neither of the cited documents disclose any information to one skilled in the art prompting this person to adopt these features in order to achieve an optimal homogenization of the light with respect to the radiation angle. Therefore the combination of features of all the claims is also patentable.

For all the reasons set forth above, no prior art reference provides an identical disclosure of the claimed invention. Hence, the present invention is not anticipated under 35 U.S.C. 102. For all these reasons, all the claims are patentable under 35 U.S.C. 103 over all the prior art applied by the Patent Examiner. A prompt notification of allowability is respectfully

requested.

Respectfully submitted,  
Michael FLEHINGHAUS ET AL.

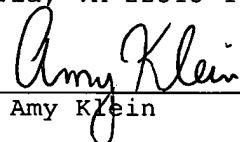
  
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Enclosure: Petition for Three Month Extension of Time

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as first class mail in an envelope addressed to: Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on June 24, 2009.

  
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